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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,438	09/19/2001	Mikio Ihama	0042-0455P-SP	9440

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EXAMINER

WALKE, AMANDA C

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/955,438

Applicant(s)

IHAMA ET AL.

Examiner

Amanda C Walke

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,7,9,13,15-17,19,20,22,23 and 25 is/are rejected.
- 7) ☒ Claim(s) 2,5,8,10-12,14,18,21 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 4, 6, 13, 15-17, 19, 20, 22, 23, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Brust et al (6,100,019).

Brust et al disclose a silver halide photographic material comprising high bromide {111} tabular grains having a high chloride epitaxy. The grains are preferably silver iodochlorobromide and contain silver iodide in an amount of less than 10 mole %, and silver chloride in an amount of less than 10 % as well (column 3, line 53 to column 4, line 35). The deposits preferably constitute 0.1 to 25 mol %, most preferably 3-5 mol % of the total silver of the grain. The epitaxial deposits may constitute only 0.1 % of the total silver, thus the chloride may be added in an amount as low as 0.1 mol %. The epitaxial deposits contain at least 90 mol %, AgCl and may contain silver bromide and/ or silver iodide as well (thus any silver bromide or silver iodide would be present in an amount of no greater than 10 mol %). The examples of the reference prepare high bromide grains comprising silver iodochloride epitaxial deposits. Since all of the epitaxies contain at least 90 mol % chloride, 90 % would be the average content (CL). Given that, all of the grains would fall within the CL ranges required by the present claims since no grains may have a AgCl content of less than 90 % (or greater than 100% for that matter), it appears that the AgCl content of the epitaxial protrusions will fall within the scope of the

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claimed CL range. Additionally, given that the amounts of silver iodide in the epitaxies of the examples contain between 0.75 and 1.2 mol% silver iodide, it appears that the grains also fall within the claimed I range. The grains account for at least 90 %, most preferably greater than 97 % of the total grain projected area, have a thickness of less than 0.2 microns, preferably less than 0.07 microns, an ECD of less than 6 microns, and an aspect ratio of at least 5 (column 5, lines 30-57). The grains may be hexagonal (column 7, lines 34-50). The examples demonstrate emulsions wherein 84, 72, and 75 % of the grains having the desired ECD, thus the COV of the grain ECD in the exemplified emulsions meets the instant claim limitations by being less than 30% in each instance (and in one instant less than 20% as required by the instant claim 16). The grains contain high chloride epitaxies in the corners of the grains, thus most preferably 97 % of the total grain population contain epitaxial deposits. The examples prepare grains having 6 epitaxial deposits, one in each corner of the grain, which implies that the grains formed by the examples are hexagonal grains. The exemplified grains also contain one or more dislocation lines at the epitaxial junctions, demonstrating that the grains may have dislocation lines at the apexes of the grains. The material comprising the emulsion is coated on a support (column 10, lines 15-18).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brust et al in view of Antoniades et al (5,250,403).

Brust et al has been discussed above as teaching grains having an ECD of preferably less than 6, and that lower ECDs result in low levels of granularity.

Antoniades et al disclose a photographic material comprising {111} silver iodobromide hexagonal grains having an average ECD of at least 0.7 microns, preferably 1 to 4 microns, and an average thickness of less than 0.07 microns.

Given that the grains of Antoniades et al are similar to those of Brust et al and are about the same size, it would have been obvious to one of ordinary skill in the art to prepare the grains of Brust et al choosing to prepare the grains having an ECD of 0.07 microns as taught by Antoniades et al to lower the granularity of the grains with reasonable expectation of achieving a material having high sensitivity.

Allowable Subject Matter

4. Claims 2, 5, 8, 10-12, 14, 18, 18, 21, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to teach or suggest to one of ordinary skill in the art to prepare grains as described by the instant claim 1 having mesh-like dislocation lines or an edge length of 2 or less.

Response to Arguments

5. Applicant's arguments filed 6/29/2004 have been fully considered but they are not persuasive.

Applicant has argued that the Brust reference fails to teach grains having a variation coefficient of the ECD is 30% or less and that 70% or more of the total projected area of the grains meet the instantly claimed criteria. As discussed above, the grains of the Brust reference account for at least 90 %, most preferably greater than 97 % of the total grain projected area, have a thickness of less than 0.2 microns, preferably less than 0.07 microns, an ECD of less than 6 microns, and an aspect ratio of at least 5. The examples demonstrate emulsions wherein 84, 72, and 75 % of the grains having the desired ECD, thus the COV of the grain ECD in the exemplified emulsions meets the instant claim limitations by being less than 30% in each instance. The grains contain high chloride epitaxies in the corners of the grains, thus most preferably 97 % of the total grain population contain epitaxial deposits. While the highest ratio in the examples for the one or more dislocations is 60%, the reference *prefers* that that ratio be greater than 97%, therefore the reference teaches the instant claim limitations.

Applicant has argued that Antoniades teaches away from the grains of Brust. The examiner has relied upon the reference *solely* for its teaching of *similar* grains and for its teaching that it is known to prepare grains having an ECD as small as 0.07 microns,, not for its teachings of the exact properties of the grains, thus the reference does not teach away from the instant invention. Additionally, the passage cited by applicant states that the grains are free of *internal* defects. As the epitaxial portions of the grains are not internal features, the dislocation lines required by the instant claims are not *internal* defects, but rather exterior, thus the

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reference does not teach away from the grain shaving dislocations in the epitaxial deposits and the examiner maintains her rejection.

Applicant has also argued that the references do not aim to solve the same problem as the instant invention (good storability). The prima facie case of obviousness is not undermined simply because applicant's motivation for teaching to prepare grains having the claimed features differs from that of the prior art's motivation. In re Dillon, 919 F.2d 688, 692-93, 16 USPQ2d 1897, 1901 (Fed. Cir. 1990) (in banc), cert. Denied, 500 U.S. 904 (1991).

Lastly, applicant has argued that the examples of the instant specification demonstrate that unexpected results are obtained by the instant invention. The examiner has considered the examples, but the examples employ preferred embodiments of the instant invention and are thus not commensurate in scope with the instant claims. For example, on page 117, it can be seen that there are no samples outside of the instantly claimed range, and that there is a great difference between the percentage of the grains having the dislocations of the comparative samples, and the inventive ones. The examples therefore do not show enough points across the instantly claimed range.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

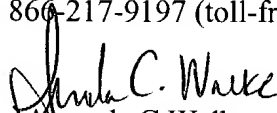
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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda C Walke whose telephone number is 571-272-1337. The examiner can normally be reached on M-R 5:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Amanda C Walke
Examiner
Art Unit 1752

ACW
October 4, 2004